Dash Robotics crowdfunding 'origami' runner you can assemble at home

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(Phys.org) —A team of Berkeley PhD engineers who worked in the school's lab explored animal locomotion strategies and shared an interest in prototypes made quickly and cheaply, particularly fast robotic runners that could be affordable and easy to explore. People found them appealing and started asking if the robots were for sale. Idea. Think origami. The team worked out a novel way to manufacture new fast-

running robot prototypes quickly and cheaply. The team, Nick Kohut, Paul Birkmeyer, Andrew Gillies and Kevin Peterson, dedicated to the spirit of a maker movement, have embarked on a mission to commercially offer robot kits for less than $70 and have made their goal a crowdfunding campaign. They plan on having the robots shipped in a flat pack as a kit and then folded out and assembled by the user at home, complete with tabs and slots to guide the way. Simple electronics for controlling the robots are included with the kit.

"With this campaign, we're funding the beta development of Dash, and we need your help. We're only producing one thousand robots, so get your Dash before we run out!" they announced on the crowdfunding site. "When you back us, you'll be getting more than just an awesome robot. You'll be participating in the beta development of our product," they said. "With your help, we can bring Dash out of the lab and into everyone's hands."

Nick Kohut, chief executive officer and co-founder of Dash Robotics, hopes their fast runners will make a difference in the price barriers that turn a lot of parents and hobbyists away from educational robots that could provide fun and learning experiences for youths.

"Most educational robots today cost hundreds of dollars – that's not realistic for most families," said Kohut.

The team, now as a company called Dash Robotics, announced Thursday that they will deliver their first robots through the crowdfunding Dragon Innovation. The latter is a crowdfunding platform, aimed at backing makers and their projects. The campaign will help the team move their robots from research prototype to the "beta" product phase, in anticipation of launching Dash commercially next year. Dash, as they hope, will carry the distinction of being the world's fold-able, programmable, origami robot that more people can afford.

The Dash kit comes with laser-cut body components, motor, transmission, and plug-and-play electronics. The assembly should take about an hour, and videos online will help show the assembly process. Once assembled, the plan is for a free app that can be used to control Dash from an iOS smartphone or tablet. The creators are developing a mobile app to control Dash robots over Bluetooth. (The team is building mobile apps so that the robot can be smartphone or tablet-controlled.) As for Android support, the team said they will work hard to support Android devices but at this point they said they could not make any guarantee. The team will support iOS devices such as iPhones and iPads that have Bluetooth 4.0.

In alpha form, and unassembled, the robot runner kit is forty dollars and the robot only runs in a straight line. These will be the first to ship. In beta form, they are building steering into the device and it will be more extensible. The beta is sixty-five dollars. They aim for beta shipping in spring 2014. Fully assembled as a complete unit is one hundred dollars.

For Dash Robotics, this fast runner is a first step. They are interested in enabling robots to talk to each other, which would extend the possibilities to fighting insect-like robots or cooperative insect-like robots on a mission, guided by the smartphone. At the time of this writing, they raised $21,950 out of a $64,000 goal with 26 days left to go.

More information: www.dragoninnovation.com/proje … 6-dash-the-diy-robot

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